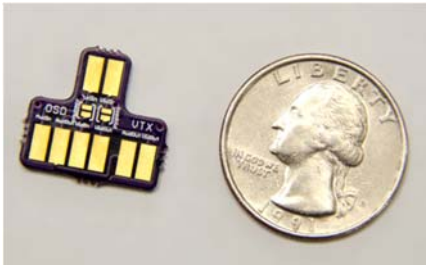

ProtoQ FPV Harness Helper

Thank you for your purchase of the ProtoQ FPV Harness Helper. This document is intended to help you quickly install your Harness Helper. The FPV Harness Helper provides a quick and convenient way to change the configuration of your FPV wiring harness using easy to solder surface mount pads and jumpers. For maximum OSD compatibility, the FPV Harness Helper supports individual passthrough for both video and audio. The FPV Harness Helper also supports power distribution across all attached devices.

Installation

To install your FPV Harness Helper, follow the simple directions below.

1. Determine passthrough configuration.
    - You will notice two solder jumpers on the top side of the board, between the camera and OSD/VTx ports. They are labeled “XosdVid” and “XosdAud”.
    - These jumpers, when shorted, pass either audio or video directly to the VTX, bypassing the OSD.
    - For example, an OSD which only supports video should *not* have the video jumper solder bridged. The audio jumper, however, should be soldered.
2. Determine the pinouts of your FPV components.
    - You’ll need to know what function each wire serves. For example, a camera may have a power, video out, audio out and ground lead.
    - This pinout should be easily found in the user manual for the component.
3. Strip the insulation back on each wire by about 0.1”.
    - Wires which do not need to be connected should not be striped, however it may be necessary to put a small amount of heat shrink around the exposed end so there is no chance of a short.
4. Tin each wire.
    - Touch the soldering iron to each wire, wait about a half second.
    - Feed a small amount of solder into the wire until the bare wire is covered in a shiny coat of solder.
5. Tin each pad of the Harness Helper.

- Touch the soldering iron to each pad on the FPV Harness Helper, wait about a half second.
- Feed a small amount of solder onto the pad until a shiny “bubble” of solder has formed.

6. Solder each wire to the appropriate location on the FPV Harness Helper.
    - See the reference images below to determine where to connect each wire.
    - Since the FPV Harness Helper and wire have both been tinned, there is *no need* to add more solder to the connection.
    - Place the wire on top of the solder bubble on the FPV Harness Helper.
    - Hold the soldering iron on the wire and solder bubble until the bubble goes molten.
    - Hold the iron in the bubble for a half second, then continue holding the wire in place and remove the iron.
7. Use the included heatshrink tubing to cover the assembled board.

Design/Contact Information

- Design by Chris Seto
- Chris@DragonLabs.net

Reference Figures Below

Reference Figures

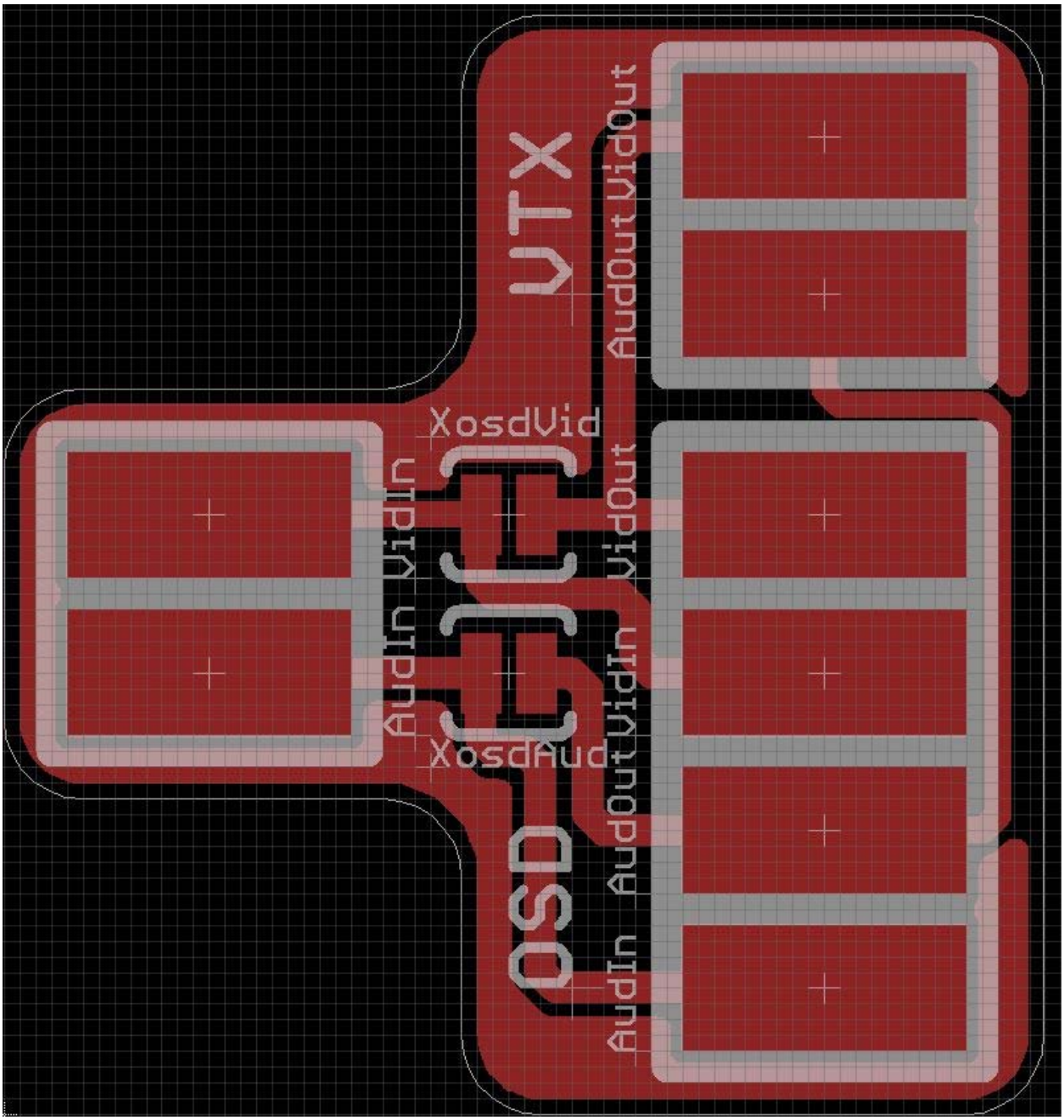

Figure 1. Top side, FPV Harness Helper, CAD View

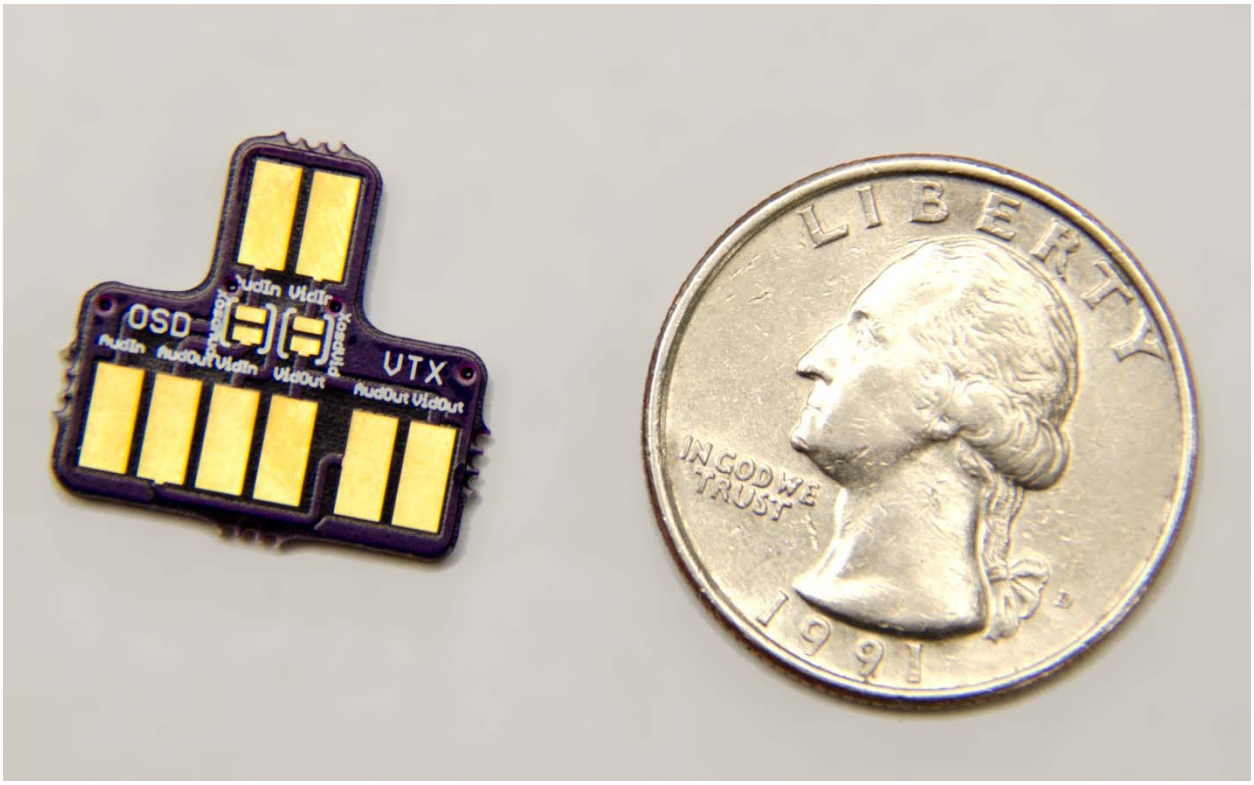

Figure 2. Top View, FPV Harness Helper, Actual Board

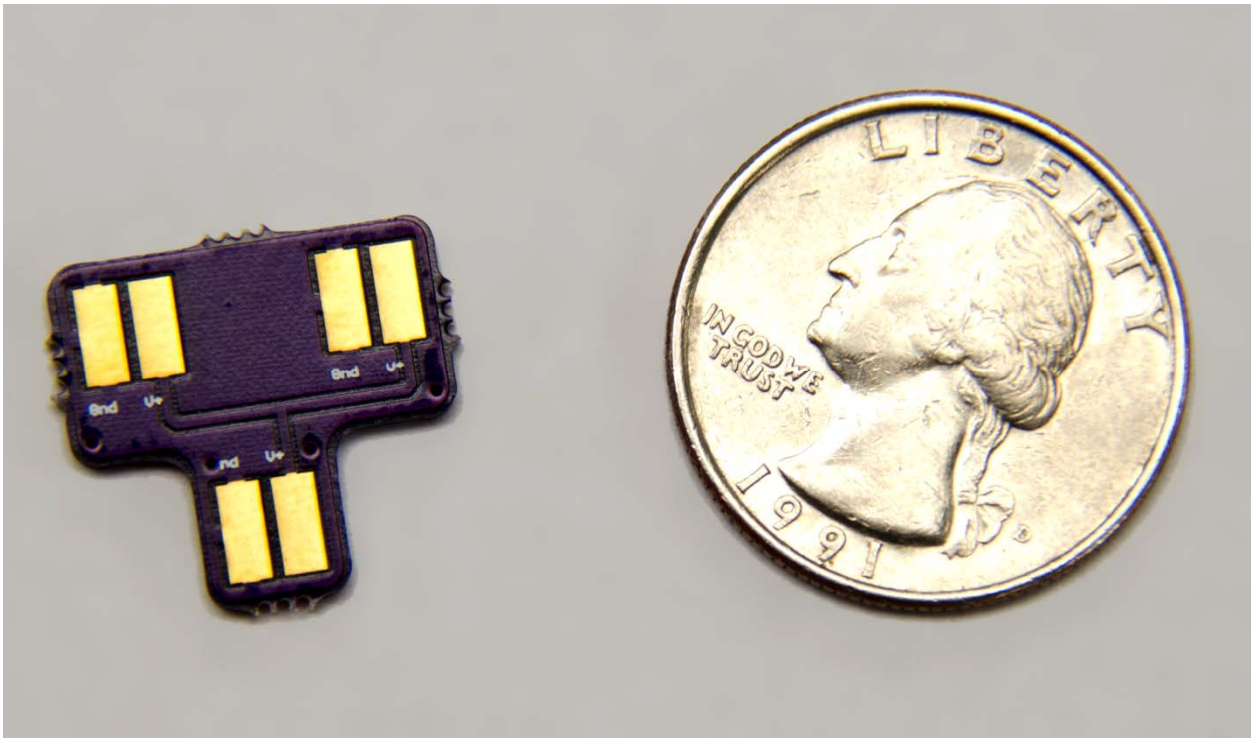

Figure 3. Bottom View, FPV Harness Helper, Actual Board